

WHAT IS CLAIMED IS:

1. A method for allowing a user interface of a first device to be hosted by a second device, the method comprising:

receiving notification at the first device that an event has occurred that is relevant to

5 said first device;

generating at least one abstract message for indicating that said event has occurred;

based on said at least one abstract message, transmitting to the second device at least one message for activating at least one particular user interface element on the second device; and

10 in response to said at least one message transmitted to the second device, activating said at least one particular user interface element on the second device.

2. The method of claim 1, wherein said at least one abstract message is generated, at least in part, based on a then-current state of the first device.

3. The method of claim 1, wherein said at least one abstract message is a logical user
15 interface message indicating a logical user interface manifestation that should occur.

4. The method of claim 1, wherein said at least one abstract message itself does not specify activation of particular user interface elements on the second device.

5. The method of claim 1, wherein said at least one message transmitted to the second device does specify activation of one or more particular user interface elements on the
20 second device.

6. The method of claim 1, wherein said first device comprises a client device and wherein said second device comprises a host device to which the client device occasionally connects.

7. The method of claim 1, wherein said step of generating at least one abstract
25 message includes:

determining a new state that is appropriate for the first device to transition to; and

generating at least one abstract message appropriate for indicating the transition to said new state.

8. The method of claim 1, wherein said event comprises a user event.

9. The method of claim 8, wherein said user event comprises user-supplied input.

5 10. The method of claim 8, wherein said user event comprises user activation of an input element.

11. The method of claim 10, wherein said input element comprises an input button.

12. The method of claim 10, wherein said input element resides on said first device.

10 13. The method of claim 10, wherein said user input element resides on said second device.

14. The method of claim 13, further comprising:
upon user activation of said user input element residing on said second device,
transmitting a notification to said first device.

15 15. The method of claim 1, further comprising:
passing said at least one abstract message to a router present at the first device,
wherein said router determines whether said at least one abstract message is handled locally
at the first device or remotely at the second device.

16. The method of claim 1, wherein said at least one particular user interface element
comprises an element capable of generating a display.

20 17. The method of claim 1, wherein said at least one particular user interface element
comprises an LED (light-emitting diode).

18. The method of claim 1, wherein said at least one particular user interface element
comprises a bitmap display.

19. The method of claim 18, wherein said bitmap display shows an icon in response to receipt of said at least one message for activating at least one particular user interface element on the second device.

20. The method of claim 1, wherein said at least one particular user interface element
5 comprises an element capable of generating sound.

21. A user interface system allowing a user interface of a first device to be supported at least in part by a second device, the system comprising:

a module for generating at least one high-level event message indicating that an event has occurred that is relevant to the first device;

10 a mapper for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device; and

a module for communicating said at least one lower-level message to the second device, such that the second device may activate one or more hardware elements that are
15 appropriate for said event that has occurred.

22. The system of claim 21, wherein said first device is temporarily connected to said second device.

23. The system of claim 21, wherein said first device is permanently connected to said second device.

20 24. The system of claim 21, wherein said first device connects to said second device via wireless communication.

25. The system of claim 21, wherein said first device connects to said second device via wireline communication.

26. The system of claim 21, wherein said first device comprises a client device that is
25 hosted by said second device.

27. The system of claim 21, wherein said first device includes media capture capability.

28. The system of claim 21, wherein said second device includes cellular phone capability.

5 29. The system of claim 21, wherein said first device also includes hardware elements capable of being controlled by said at least one lower-level message.

30. The system of claim 21, wherein said at least one high-level message is generated, at least in part, based on a then-current state of the first device.

10 31. The system of claim 21, wherein said at least one high-level message is a logical user interface message indicating a logical user interface manifestation that should occur.

32. The system of claim 21, wherein said at least one high-level message itself does not specify activation of particular hardware elements on the second device.

33. The system of claim 21, wherein said at least one lower-level message does specify activation of one or more particular hardware elements on the second device.

15 34. The system of claim 21, wherein said first device comprises a client device and wherein said second device comprises a host device to which the client device occasionally connects.

20 35. The system of claim 21, wherein said module for generating at least one high-level event message determines a new state that is appropriate for the first device to transition to; and generates at least one high-level message appropriate for indicating the transition to said new state.

36. The system of claim 21, wherein said event comprises a user event.

37. The system of claim 36, wherein said user event comprises user-supplied input.

38. The system of claim 36, wherein said user event comprises user activation of an input element.

39. The system of claim 38, wherein said input element comprises an input button.

40. The system of claim 38, wherein said input element resides on said first device.

5 41. The system of claim 38, wherein said user input element resides on said second device.

42. The system of claim 41, further comprising:
a module for transmitting a notification to said first device in response to user activation of said user input element residing on said second device.

10 43. The system of claim 21, further comprising:
a router present at the first device for determining whether said at least one abstract message is handled locally at the first device or remotely at the second device.

44. The system of claim 21, wherein said at least one particular hardware element comprises an element capable of generating a display.

15 45. The system of claim 21, wherein said at least one particular hardware element comprises an LED (light-emitting diode).

46. The system of claim 21, wherein said at least one particular hardware element comprises a bitmap display.

20 47. The system of claim 46, wherein said bitmap display shows an icon in response to receipt at the second device of said at least one lower-level message.

48. The system of claim 21, wherein said at least one particular hardware element comprises an element capable of generating sound.

49. The system of claim 21, wherein said first device may be embedded within said second device.

50. The system of claim 21, wherein said module for communicating said at least one lower-level message to the second device employs a configurable table so that the second
5 device itself may be selected from different classes of devices.